INSTEON

INSTEON Developer Notes
Smoke Bridge (2982-xxx)

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Revision History

Release Date	Author	Description
02/07/2014	jtalmich	V0.1 for Smoke Bridge

Device Description

Details

Device Name	Smoke Bridge
Product SKU	2982-222
Product Website	http://www.smarthome.com/2982-222/INSTEON-Smoke-Bridge/p.aspx
Category	0x10 – Security, Health, and Safety
Subcategory	0x0A
Tested Firmware Version	DC
Supports SD Messaging	YES
Supports ED Messaging	YES
I2CS enabled (CS)	YES

Example Standard Length Message

A Standard Length Message (SD) is comprised of exactly nine (9) bytes.

Byte(s)	Description	Example
1-3	Transmitting INSTEON Device ID	AA BB CC
4-6	Receiving INSTEON Device ID (Target Device)	11 22 33
7	Flag Byte (Message Type)	0F
8	Command 1	11
9	Command 2	FF

Standard Message Formatted	AA BB CC 11 22 33 0F 11 FF

The above example will send an ON(11) at Full(FF) command to device 11 22 33.*

*For a detailed explaination of INSTEON Messaging, please see the INSTEON Manual

Example Extended Length Message

An Extended Length Message (ED) is comprised of exactly nine (23) bytes.

Byte(s)	Description	Example
1-3	Transmitting INSTEON Device ID	AA BB CC
4-6	Receiving INSTEON Device ID (Target Device)	11 22 33
7	Flag Byte (Message Type)	1F
8	Command 1	20
9	Command 2	01
10-22	Data1 – Data13	00 00 00 00 00 00 00 00 00 00 00 00 00
23	Data14 (Checksum)	DF

Extended Message Formatted	AA BB CC 11 22 33 1F 20 01 00 00 00 00 00 00 00 00 00 00 00 00 00 DF

The above example will send an Set Operating Flags (20) of Programming Lock Off(01) command to device 11 22 33.*

*For a detailed explaination of INSTEON Messaging, please see the INSTEON Manual

Messages Sent From – Smoke Bridge

When an INSTEON device is active to trigger a group message the messages are sent in the following order *depending on flag options for some devices

Message Sent (Type)	Example
Group Broadcast Message on Activation	AA BB CC 00 00 01 CF 11 01
Direct Message for CleanUp	AA BB CC 11 22 33 40 11 01
Group Broadcast Message Success Report	AA BB CC 11 01 01 CF 06 00

All INSTEON Devices will send a group message for a particular activation. For Multi Group devices, the Group number will change depending on the group that was activated. The CleanUp messages and Success Reports will be the same with exception to the Group Number.

Assign to ALL-Link Group

This command is sent after holding down the SET Button for 3 seconds on the device.

Command Name	Assign to ALL-Link Group
Message Length	Standard Message (SD)
Message Type	Broadcast
To Address (Hi Byte)	0x10
To Address (Mid Byte)	0x0A
To Address (Low Byte)	Firmware Revision
Command 1	0x01
Command 2	Hardware Revision

Command Example:

Assign to ALL-Link Group	**AA BB CC 10 0A DC 8B 01 00**

The above example is the command a Smoke Bridge sends when it goes into Linking Mode after its SET Button has been pressed and held for about 3 seconds. The To Address contains the Device Category (0x10), Device Subcategory (0x0A), and Firmware Revision (0xDC). Command 2 contains the Hardware Revision (0x00).

Docklight Example:

```
02 50 1A CE D1 10 0A DC 8B 01 00  STD INSTEON RX
```

Success Report

This command is sent at the end of a group broadcast.

Command Name	Success Report
Message Length	Standard Message (SD)
Message Type	Broadcast
To Address (Hi Byte)	Cmd1 being cleaned up
To Address (Mid Byte)	Number of devices to be cleaned up
To Address (Low Byte)	Group number
Command 1	0x06
Command 2	Number of failed cleanups

Command Example:

Success Report	**AA BB CC 11 02 01 CB 06 01**

The above example is the message a Smoke Bridge sends out after a group broadcast. The To Address contains the Cmd1 being cleaned up (0x11), number of devices to be cleaned up (0x02), and the group number (0x01). Command 2 contains the number of failed cleanups (0x01)

Docklight Example:

```
02 50 21 7D B9 11 02 01 CB 06 00  INSTEON STD RX
 Cleanup Report Zero Error Example (Cmd1=0x11, 2 Devices in Group, Group 1)
02 50 21 7D B9 11 02 01 CB 06 00  INSTEON STD RX
 Cleanup Report Zero Error Example (Cmd1=0x11, 2 Devices in Group, Group 1)

02 50 21 7D B9 11 02 01 CB 06 01  INSTEON STD RX
 Cleanup Report One Error Example (Cmd1=0x11, 2 Devices in Group, Group 1)
02 50 21 7D B9 11 02 01 CB 06 01 INSTEON STD RX
 Cleanup Report One Error Example (Cmd1=0x11, 2 Devices in Group, Group 1)
```

Smoke Sensor – Smoke Detected

This command is sent out when the smoke alarm tells the smoke bridge it detects smoke.

Command Name	Smoke Sensor – Smoke Detected
Message Length	Standard Message (SD)
Message Type	Broadcast
To Address	0x00 0x00 0x01
Command 1	0x11
Command 2	Ignored Value

Command Example:

Smoke Sensor – Smoke Detected	AA BB CC 00 00 01 CB 11 01

The above example is the command a Smoke Bridge sends out when the smoke alarm it is paired to detects smoke. The To Address Low Byte contains the group (0x01), and Cmd1 is the On command (0x11).

Docklight Example:

```
02 50 1A CE D1 00 00 01 CB 11 01  INSTEON STD RX
02 50 1A CE D1 14 84 E2 41 11 01  INSTEON STD RX
```

Smoke Sensor – CO Detected

This command is sent out when the smoke alarm tells the smoke bridge it detects CO.

Command Name	Smoke Sensor – CO Detected
Message Length	Standard Message (SD)
Message Type	Broadcast
To Address (Hi Byte)	0x00 0x00 0x02
Command 1	0x11
Command 2	Ignored Value

Command Example:

Smoke Sensor – CO Detected	AA BB CC 00 00 02 CB 11 02

The above example is the command a Smoke Bridge sends out when the smoke alarm it is paired to detects CO. The To Address Low Byte contains the group (0x02), and Cmd1 is the On command (0x11).

Docklight Example:

```
02 50 21 7D B9 00 00 02 CB 11 02  INSTEON STD RX
02 50 1A CE D1 14 84 E2 41 11 02  INSTEON STD RX
```

Smoke Sensor – Test Detected

This command is sent out when the smoke alarm tells the smoke bridge it is doing a test.

Command Name	Smoke Sensor – Test Detected
Message Length	Standard Message (SD)
Message Type	Broadcast
To Address (Hi Byte)	0x00 0x00 0x03
Command 1	0x11
Command 2	Ignored Value

Command Example:

Smoke Sensor – Test Detected	AA BB CC 00 00 03 CB 11 03

The above example is the command a Smoke Bridge sends out when the smoke alarm it is paired to detect a test is being run. The To Address Low Byte contains the group (0x03), and Cmd1 is the On command (0x11).

Docklight Example:

```
02 50 21 7D B9 00 00 03 CB 11 03  INSTEON STD RX
02 50 1A CE D1 14 84 E2 41 11 03  INSTEON STD RX
```

Smoke Sensor – New or Unknown Message Sent from Detector

This command is sent out when the smoke alarm tells the smoke bridge it detects CO.

Command Name	Smoke Sensor – New or Unknown Message Sent from Detector
Message Length	Standard Message (SD)
Message Type	Broadcast
To Address (Hi Byte)	0x00 0x00 0x04
Command 1	0x11
Command 2	Ignored Value

Command Example:

Smoke Sensor – New or Unknown Message Sent from Detector	**AA BB CC 00 00 04 CB 11 04**

The above example is the command a Smoke Bridge sends out when the smoke alarm it is paired to sends a New or Unknown Message. The To Address Low Byte contains the group (0x04), and Cmd1 is the On command (0x11).

Docklight Example:

```
02 50 21 7D B9 00 00 04 CB 11 04  INSTEON STD RX
02 50 1A CE D1 14 84 E2 41 11 04  INSTEON STD RX
```

Smoke Sensor – Clear Detected

This command is sent out when the smoke alarm tells the smoke bridge it detects CO.

Command Name	Smoke Sensor – Clear Detected
Message Length	Standard Message (SD)
Message Type	Broadcast
To Address (Hi Byte)	0x00 0x00 0x05
Command 1	0x11
Command 2	Ignored Value

Command Example:

Smoke Sensor – Clear Detected	AA BB CC 00 00 05 CB 11 05

The above example is the command a Smoke Bridge sends out when the smoke alarm it is paired to detects an All Clear. The To Address Low Byte contains the group (0x05), and Cmd1 is the On command (0x11).

Docklight Example:

```
02 50 21 7D B9 00 00 05 CB 11 05  INSTEON STD RX
02 50 1A CE D1 14 84 E2 41 11 05  INSTEON STD RX
```

Smoke Sensor – Low Battery

This command is sent out when the smoke alarm tells the smoke bridge its battery is low.

Command Name	Smoke Sensor – Low Battery
Message Length	Standard Message (SD)
Message Type	Broadcast
To Address (Hi Byte)	0x00 0x00 0x06
Command 1	0x11
Command 2	Ignored Value

Command Example:

Smoke Sensor – Low Battery	**AA BB CC 00 00 06 CB 11 06**

The above example is the command a Smoke Bridge sends out when the smoke alarm it is paired to detects it has a Low Battery. The To Address Low Byte contains the group (0x06), and Cmd1 is the On command (0x11).

Docklight Example:

```
02 50 21 7D B9 00 00 06 CB 11 06  INSTEON STD RX
02 50 1A CE D1 14 84 E2 41 11 06  INSTEON STD RX
```

Smoke Sensor – Sensor Malfunction

This command is sent out when the smoke alarm tells the smoke bridge it detects CO.

Command Name	Smoke Sensor – Sensor Malfunction
Message Length	Standard Message (SD)
Message Type	Broadcast
To Address (Hi Byte)	0x00 0x00 0x07
Command 1	0x11
Command 2	Ignored Value

Command Example:

Smoke Sensor – Sensor Malfunction	AA BB CC 00 00 07 CB 11 07

The above example is the command a Smoke Bridge sends out when the smoke alarm it is paired to detects a Malfunction. The To Address Low Byte contains the group (0x07), and Cmd1 is the On command (0x11).

Docklight Example:

```
02 50 21 7D B9 00 00 07 CB 11 07  INSTEON STD RX
02 50 1A CE D1 14 84 E2 41 11 07  INSTEON STD RX
```

Heartbeat

This command is sent about once every 24 hours as a check that the device still has power.

Command Name	Heartbeat
Message Length	Standard Message (SD)
Message Type	Broadcast
To Address (Hi Byte)	0x00 0x00 0x0A
Command 1	0x11
Command 2	0x00

Command Example:

Heartbeat	AA BB CC 00 00 0A CB 11 00

The above example is the command a Smoke Bridge sends out once about every 24 hours. The To Address Low Byte contains the group (0x0A).

Docklight Example:

```
4/10/2013 17:33:04.869 [RX] - 02 50 1A EF 11 00 00 0A CB 11 00  STD INSTEON RX
4/10/2013 17:33:05.096 [RX] - 02 50 1A EF 11 1A 77 7B 41 11 0A  STD INSTEON RX
4/10/2013 17:33:05.303 [RX] - 02 50 1A EF 11 11 01 0A CB 06 00  STD INSTEON RX
```

Messages Sent To – Smoke Bridge

INSTEON Engine Version

This command requests the INSTEON Engine version of the device.

Command Name	INSTEON Engine Version
Message Length	Standard Message (SD)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x0D
Command 2	0x00

Command Name	INSTEON Engine Version Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x0D
Command 2	0x02 (Indicates i2CS engine version)

Command Example:

INSTEON Engine Version **INSTEON Engine Version Response**	**AA BB CC 11 22 33 0F 0D 00** **11 22 33 AA BB CC 2B 0D 02**

The above example device 11 22 33 is asked what it's Engine Version is(0x0D 0x00). Device 11 22 33 then responds back that it has an i2CS engine version(0x02)..

Docklight Example:

```
9/24/2013 13:35:39.123 [RX] - 02 62 21 7D B9 0F 0D 00 06  INSTEON STD TX
02 50 21 7D B9 1A 77 7B 2B 0D 02  INSTEON STD RX
 i2CS Engine Version
```

Ping

This command checks that the device is able to respond over INSTEON.

Command Name	Ping
Message Length	Standard Message (SD)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x0F
Command 2	Ignored Value

Command Name	Ping Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x0F
Command 2	Same as what was received in Command 2

Command Example:

Ping **Ping Response**	**AA BB CC 11 22 33 0F 0F 00** **11 22 33 AA BB CC 2B 0F 00**

The above example is the communication that goes on between a Controller and the Smoke Bridge when it is sent a Ping command. The device 11 22 33 is sent a Ping Command (0x0F). The device 11 22 33 then responds back to device AA BB CC with a Ping Response of the exact same thing it received in Command 1 and Command 2.

Docklight Example:

```
9/24/2013 13:35:40.329 [TX] - 02 62 21 7D B9 0F 0F 00
9/24/2013 13:35:40.355 [RX] - 02 62 21 7D B9 0F 0F 00 06  INSTEON STD TX
02 50 21 7D B9 1A 77 7B 2B 0F 00  INSTEON STD RX
 Ping Response
```

ID Request

This command asks for the device's Device category, Device Subcategory, Firmware Revision, and Hardware Revision. It is the same info the device sends when it goes into Linking Mode.

Command Name	ID Request
Message Length	Standard Message (SD)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x10
Command 2	Ignored Value

Command Name	ID Request Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x10
Command 2	Same as what was received in Command 2

Command Name	ID Request Data
Message Length	Standard Message (SD)
Message Type	Broadcast
Transmitting Device ID	Smoke Bridge
To Address (Hi Byte)	Device Category
To Address (Mid Byte)	Device Subcategory
To Address (Low Byte)	Firmware Revision
Flags Byte	Message Type
Command 1	0x01
Command 2	Hardware Revision

Command Example:

ID Request **ID Request Response** **ID Request Data**	**AA BB CC 11 22 33 0F 10 00** **11 22 33 AA BB CC 2B 10 00** **11 22 33 10 0A 89 DC 01 00**

The above example is the communication that goes on between a Controller and the Smoke Bridge when it is sent an ID Request command. The device 11 22 33 is sent an ID Request Command (0x10). The device 11 22 33 then responds back to device AA BB CC with a ID Request Response of the exact same thing it received in Command 1 and Command 2. The device 11 22 33 then responds back with the ID Request Data of Device category (0x10), Device subcategory (0x0A), Firmware Revision (0xDC), and the Hardware Revision (0x00). Essentially the devices sends out the exact same thing it sends out when it goes into Linking Mode without going into Linking Mode.

Docklight Example:

```
3/12/2013 16:10:49.522 [TX] - 02 62 1A CE D1 0F 10 00
3/12/2013 16:10:49.527 [RX] - 02 62 1A CE D1 0F 10 00 06   INSTEON STD TX

3/12/2013 16:10:49.831 [RX] - 02 50 1A CE D1 14 84 E2 2B 10 00   STD INSTEON RX

3/12/2013 16:10:50.039 [RX] - 02 50 1A CE D1 10 0A DC 8B 01 00   STD INSTEON RX
```

Read Configuration Byte

This command asks the device for its Configuration Byte.

Command Name	Read Configuration Byte
Message Length	Standard Message (SD)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x1F
Command 2	0x00

Command Name	Read Configuration Byte Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Configuration Byte	Message Type
Command 1	0x1F
Command 2	Configuration Byte: bit 0 = Programming Lock bit 1 = LED On/Off on TX bit 2 = N/A bit 3 = N/A bit 4 = LED On/Off bit 5 = Heartbeat On/Off bit 6 = Cleanup Report bit 7 = N/A (0x62 is the default Config Byte)

Command Example:

Read Configuration Byte	**AA BB CC 11 22 33 0F 1F 00**
Read Configuration Byte Response	**11 22 33 AA BB CC 2B 1F 62**

The above example device 11 22 33 is sent a command that asks it for its Configuration Byte(Command 1 = 0x1F, Command 2 = 0x00). Device 11 22 33 then responds back with its Configuration Byte (0x62). This means that device 11 22 33 has Programming Lock Off, LED blink on TX On, LED On, Heartbeat On, and Cleanup Report On.

Docklight Example:

```
3/12/2013 16:13:15.408 [TX] - 02 62 1A CE D1 0F 1F 00
3/12/2013 16:13:15.418 [RX] - 02 62 1A CE D1 0F 1F 00 06   INSTEON STD TX

3/12/2013 16:13:15.722 [RX] - 02 50 1A CE D1 14 84 E2 2B 1F 62   STD INSTEON RX
```

Database Delta

This command asks the device for its current Database Delta Number. The Database Delta increments with any database write. The Database Delta is cleared on power cycle.

Command Name	Database Delta
Message Length	Standard Message (SD)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x1F
Command 2	0x01

Command Name	Database Delta Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x1F
Command 2	Database Delta

Command Example:

Database Delta **Database Delta Response**	**AA BB CC 11 22 33 0F 1F 01** **11 22 33 AA BB CC 2B 1F 03**

The above example device 11 22 33 is sent a command that asks it for its Database Delta (Command 1 = 0x1F, Command 2 = 0x01). Device 11 22 33 then responds back with its Database Delta (0x03). This means that device 11 22 33 has had three Database writes since its last power cycle.

Docklight Example:

```
9/13/2013 10:21:54.135 [TX] - 02 62 29 70 02 0F 1F 01
9/13/2013 10:21:54.161 [RX] - 02 62 29 70 02 0F 1F 01 06  INSTEON STD TX
                              02 50 29 70 02 1A 77 7B 2B 1F 01  INSTEON STD RX Database Delta
```

Beep

This command will beep the Smoke Bridge beeper once.

Command Name	Beep
Message Length	Standard Message (SD)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x30
Command 2	0x01

Command Name	Beep Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x30
Command 2	0x01

Command Example:

Beep **Beep Response**	**AA BB CC 11 22 33 0F 30 01** **11 22 33 AA BB CC 2B 30 01**

The above example device 11 22 33 is sent a command that asks it to beep once (Command 1 = 0x30, Command 2 = 0x01). Device 11 22 33 then responds back with the exact same data in Command 1 and Command 2 (Command 1 = 0x30, Command 2 = 0x01). The device should also beep once as well.

Docklight Example:

```
3/12/2013 16:18:43.155 [TX] - 02 62 1A CE D1 0F 30 01
3/12/2013 16:18:43.163 [RX] - 02 62 1A CE D1 0F 30 01 06  INSTEON STD TX

3/12/2013 16:18:43.467 [RX] - 02 50 1A CE D1 14 84 E2 2B 30 01  STD INSTEON RX
```

Remote Enter Linking Mode

This command puts the device into Linking Mode

Command Name	Remote Enter Linking Mode
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x09
Command 2	Group Number
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	Remote Enter Linking Mode Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x09
Command 2	Same as what was received in Command 2

Command Name	Assign to ALL-Link Group
Message Length	Standard Message (SD)
Message Type	Broadcast
Transmitting Device ID	Smoke Bridge
To Address (Hi Byte)	Device Category
To Address (Mid Byte)	Device Subcategory
To Address (Low Byte)	Firmware Revision
Flags Byte	Message Type
Command 1	0x01
Command 2	Hardware Revision

Command Example:

Remote Enter Linking Mode **Remote Enter Linking Mode Response** **Assign to ALL-Link Group**	**AA BB CC 11 22 33 1F 09 01 00 00 00 00** **00 00 00 00 00 00 00 00 00 F7** **11 22 33 AA BB CC 2B 09 01** **11 22 33 10 0A DC 8B 01 00**

The above example, device 11 22 33 is sent a command that tells it to go into Linking Mode (0x09) and to link to Group 1(0x01). Device 11 22 33 will ACK the command and then goes into Linking Mode.

Docklight Example:

```
1/30/2014 11:40:09.833 [TX] - 02 62 1A CB 70 1F 09 01 00 00 00 00 00 00 00 00 00 00 00 00 00 F6
1/30/2014 11:40:09.854 [RX] - 02 62 1A CB 70 1F 09 01 00 00 00 00 00 00 00 00 00 00 00 00 00 F6
06  INSTEON EXT TX

1/30/2014 11:40:10.392 [RX] - 02 50 1A CB 70 AA AA 01 2B 09 01  STD INSTEON RX

1/30/2014 11:40:10.584 [RX] - 02 50 1A CB 70 10 0A DC 8B 01 00  STD INSTEON RX
```

Remote Exit Linking Mode

This command tells the device to exit linking mode.

Command Name	Remote Exit Linking Mode
Message Length	Standard Message (SD)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x08
Command 2	Ignored Value

Command Name	Remote Exit Linking Mode Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x08
Command 2	Same as what was received in Command 2

Command Example:

Remote Exit Linking Mode	**AA BB CC 11 22 33 1F 08 00**
Remote Exit Linking Mode Response	**11 22 33 AA BB CC 2B 08 00**

The above example device 11 22 33 is sent a command that tells it to exit Linking Mode (0x08).

Docklight Example:

```
1/30/2014 11:53:13.594 [TX] - 02 62 1A CB 70 0F 08 01
1/30/2014 11:53:13.615 [RX] - 02 62 1A CB 70 0F 08 01 06  INSTEON STD TX

1/30/2014 11:53:13.913 [RX] - 02 50 1A CB 70 AA AA 01 2B 08 01  STD INSTEON RX
```

Remote Enter UnLinking Mode

This command tells the device to enter unlinking mode.

Command Name	Remote Enter UnLinking Mode
Message Length	Standard Message (SD)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x0A
Command 2	Group Number

Command Name	Remote Enter UnLinking Mode Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x0A
Command 2	Same as what was received in Command 2

Command Name	Set Button Held
Message Length	Standard Message (SD)
Message Type	Broadcast
Transmitting Device ID	Smoke Bridge
To Address (Hi Byte)	Device Category
To Address (Mid Byte)	Device Subcategory
To Address (Low Byte)	Firmware Revision
Flags Byte	Message Type
Command 1	0x01
Command 2	Hardware Revision

Command Example:

Remote Enter UnLinking Mode **Remote Enter UnLinking Mode Response** **Set Button Held**	**AA BB CC 11 22 33 1F 0A 01** **11 22 33 AA BB CC 2B 0A 01** **11 22 33 10 0A DC 8B 01 00**

The above example, device 11 22 33 is sent a command that tells it to go into UnLinking Mode (0x0A) and to unlink from Group 1(0x01). Device 11 22 33 will ACK the command and then goes into UnLinking Mode.

Docklight Example:

```
1/30/2014 11:53:09.648 [TX] - 02 62 1A CB 70 0F 0A 01
1/30/2014 11:53:09.674 [RX] - 02 62 1A CB 70 0F 0A 01 06  INSTEON STD TX

1/30/2014 11:53:09.962 [RX] - 02 50 1A CB 70 AA AA 01 2B 0A 01  STD INSTEON RX

1/30/2014 11:53:10.154 [RX] - 02 50 1A CB 70 10 0A DC 8B 01 00  STD INSTEON RX
```

Programming Lock On

This command tells disables the ability of the device to go into Linking Mode.

Command Name	Programming Lock On
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x20
Command 2	0x00
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	Programming Lock On Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x20
Command 2	0x00

Command Example:

Programming Lock On **Programming Lock On Response**	**AA BB CC 11 22 33 1F 20 00 00 00 00 00 00 00 00 00 00 00 00 00 00 E0** **11 22 33 AA BB CC 2B 20 00**

The above example device 11 22 33 is sent a command that disables the ability to go into Linking Mode (0x20 0x00).

Docklight Example:

```
9/19/2013 10:44:40.362 [TX] - 02 62 29 70 02 1F 20 00 00 00 00 00 00 00 00 00 00 00 00 00 00 E0

9/19/2013 10:44:40.378 [RX] - 02 62 29 70 02 1F 20 00 00 00 00 00 00 00 00 00 00 00 00 00 00 E0
                              06  INSTEON EXT TX
                              02 50 29 70 02 1A 77 7B 2B 20 00  INSTEON STD RX Set Operating
                              Flags (Programming Lock On)
```

Programming Lock Off

This command enables the ability of the device to go into Linking Mode.

Command Name	Programming Lock Off
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x20
Command 2	0x01
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	Programming Lock Off Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x20
Command 2	0x01

Command Example:

Programming Lock Off **Programming Lock Off Response**	**AA BB CC 11 22 33 1F 20 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00 DF** **11 22 33 AA BB CC 2B 20 01**

The above example device 11 22 33 is sent a command that enables the ability to go into Linking Mode (0x20 0x01).

Docklight Example:

```
9/18/2013 18:13:37.279 [TX] - 02 62 29 70 02 1F 20 01 00 00 00 00 00 00 00 00 00 00 00 00 00 DF
9/18/2013 18:13:37.291 [RX] - 02 62 29 70 02 1F 20 01 00 00 00 00 00 00 00 00 00 00 00 00 00 DF
06  INSTEON EXT TX
02 50 29 70 02 1A 77 7B 2B 20 01 INSTEON STD RX Set Operating Flags (Programming Lock Off)
```

LED Blink on Traffic On

This command enables the feature of the LED blinking on traffic.

Command Name	LED Blink on Traffic On
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x20
Command 2	0x02
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	LED Blink on Traffic On Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x20
Command 2	0x02

Command Example:

LED Blink on Traffic On **LED Blink on Traffic On Response**	**AA BB CC 11 22 33 1F 20 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 DE** **11 22 33 AA BB CC 2B 20 02**

The above example device 11 22 33 is sent a command that enables LED blinking on traffic (0x20 0x02).

Docklight Example:

```
2/5/2014 14:07:46.855 [TX] - 02 62 1A CB 70 1F 20 02 00 00 00 00 00 00 00 00 00 00 00 00 00 DE
2/5/2014 14:07:46.877 [RX] - 02 62 1A CB 70 1F 20 02 00 00 00 00 00 00 00 00 00 00 00 00 00 DE 06
INSTEON EXT TX

2/5/2014 14:07:47.404 [RX] - 02 50 1A CB 70 AA AA 01 2B 20 02  STD INSTEON RX
```

LED Blink on Traffic Off

This command disables the feature of the LED blinking on traffic.

Command Name	LED Blink on Traffic Off
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x20
Command 2	0x03
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	LED Blink on Traffic Off Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x20
Command 2	0x03

Command Example:

LED Blink on Traffic Off **LED Blink on Traffic Off Response**	**AA BB CC 11 22 33 1F 20 03 00 00 00 00 00 00 00 00 00 00 00 00 00 00 DD** **11 22 33 AA BB CC 2B 20 03**

The above example device 11 22 33 is sent a command that disables LED Blink on Traffic (0x20 0x03).

Docklight Example:

```
2/5/2014 14:07:48.238 [TX] - 02 62 1A CB 70 1F 20 03 00 00 00 00 00 00 00 00 00 00 00 00 00 DD
2/5/2014 14:07:48.252 [RX] - 02 62 1A CB 70 1F 20 03 00 00 00 00 00 00 00 00 00 00 00 00 00 DD 06
INSTEON EXT TX

2/5/2014 14:07:48.780 [RX] - 02 50 1A CB 70 AA AA 01 2B 20 03  STD INSTEON RX
```

Heartbeat On

This command enables the Heartbeat feature.

Command Name	Heartbeat On
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x20
Command 2	0x06
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	Heartbeat On Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x20
Command 2	0x06

Command Example:

Heartbeat On **Heartbeat On Response**	**AA BB CC 11 22 33 1F 20 06 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 DA** **11 22 33 AA BB CC 2B 20 06**

The above example device 11 22 33 is sent a command that enables the Heartbeat feature (0x20 0x06).

Docklight Example:

```
2/5/2014 14:15:07.410 [TX] - 02 62 1A CB 70 1F 20 06 00 00 00 00 00 00 00 00 00 00 00 00 00 00 DA
2/5/2014 14:15:07.426 [RX] - 02 62 1A CB 70 1F 20 06 00 00 00 00 00 00 00 00 00 00 00 00 00 00 DA 06
INSTEON EXT TX

2/5/2014 14:15:07.969 [RX] - 02 50 1A CB 70 AA AA 01 2B 20 06  STD INSTEON RX
```

Heartbeat Off

This command disables the heartbeat feature.

Command Name	Heartbeat Off
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x20
Command 2	0x07
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	Heartbeat OFF Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x20
Command 2	0x07

Command Example:

Heartbeat Off **Heartbeat Off Response**	**AA BB CC 11 22 33 1F 20 07 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 D9** **11 22 33 AA BB CC 2B 20 07**

The above example device 11 22 33 is sent a command that disables the Heartbeat feature (0x20 0x07).

Docklight Example:

```
2/5/2014 14:15:08.580 [TX] - 02 62 1A CB 70 1F 20 07 00 00 00 00 00 00 00 00 00 00 00 00 00 D9
2/5/2014 14:15:08.593 [RX] - 02 62 1A CB 70 1F 20 07 00 00 00 00 00 00 00 00 00 00 00 00 00 D9 06
INSTEON EXT TX

2/5/2014 14:15:09.121 [RX] - 02 50 1A CB 70 AA AA 01 2B 20 07  STD INSTEON RX
```

LED Off

This command disables the LED (except for linking mode).

Command Name	LED Off
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x20
Command 2	0x08
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	LED Off Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x20
Command 2	0x08

Command Example:

LED Off **LED Off Response**	**AA BB CC 11 22 33 1F 20 08 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 D8** **11 22 33 AA BB CC 2B 20 08**

The above example device 11 22 33 is sent a command that disables the LED, except when it goes into linking mode (0x20 0x08).

Docklight Example:

```
2/5/2014 14:53:26.577 [TX] - 02 62 1A CB 70 1F 20 08 00 00 00 00 00 00 00 00 00 00 00 00 00 D8
2/5/2014 14:53:26.605 [RX] - 02 62 1A CB 70 1F 20 08 00 00 00 00 00 00 00 00 00 00 00 00 00 D8 06
INSTEON EXT TX

2/5/2014 14:53:27.133 [RX] - 02 50 1A CB 70 AA AA 01 2B 20 08  STD INSTEON RX
```

LED On

This command tells the device to enter Linking Mode on Power Up.

Command Name	LED On
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x20
Command 2	0x09
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	LED On Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x20
Command 2	0x09

Command Example:

LED On **LED On Response**	**AA BB CC 11 22 33 1F 20 09 00 00 00 00 00 00 00 00 00 00 00 00 00 00 D7** **11 22 33 AA BB CC 2B 20 09**

The above example device 11 22 33 is sent a command that enables the LED (0x20 0x09).

Docklight Example:

```
2/5/2014 14:53:27.777 [TX] - 02 62 1A CB 70 1F 20 09 00 00 00 00 00 00 00 00 00 00 00 00 00 D7
2/5/2014 14:53:27.805 [RX] - 02 62 1A CB 70 1F 20 09 00 00 00 00 00 00 00 00 00 00 00 00 00 D7 06
INSTEON EXT TX

2/5/2014 14:53:28.330 [RX] - 02 50 1A CB 70 AA AA 01 2B 20 09  STD INSTEON RX
```

Cleanup Report Off

This command tells the device to disable Cleanup Reports.

Command Name	Cleanup Report Off
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x20
Command 2	0x0A
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	Cleanup Report Off Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x20
Command 2	0x0A

Command Example:

Cleanup Report Off **Cleanup Report Off Response**	**AA BB CC 11 22 33 1F 20 0A 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 D6** **11 22 33 AA BB CC 2B 20 0A**

The above example device 11 22 33 is sent a command that disables Cleanup Reports (0x20 0x0A).

Docklight Example:

```
2/5/2014 16:43:43.860 [TX] - 02 62 1A CB 70 1F 20 0A 00 00 00 00 00 00 00 00 00 00 00 00 00 D6
2/5/2014 16:43:43.888 [RX] - 02 62 1A CB 70 1F 20 0A 00 00 00 00 00 00 00 00 00 00 00 00 00 D6 06
INSTEON EXT TX

2/5/2014 16:43:44.416 [RX] - 02 50 1A CB 70 AA AA 01 2B 20 0A  STD INSTEON RX
```

Cleanup Report On

This command tells the device to enable Cleanup Reports.

Command Name	Cleanup Report On
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x20
Command 2	0x0B
Data 1 – Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	Cleanup Report On Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x20
Command 2	0x0B

Command Example:

Cleanup Report On **Cleanup Report On Response**	**AA BB CC 11 22 33 1F 20 0B 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 D5** **11 22 33 AA BB CC 2B 20 0B**

The above example device 11 22 33 is sent a command that enables Cleanup Reports (0x20 0x0B).

Docklight Example:

```
2/5/2014 16:43:45.070 [TX] - 02 62 1A CB 70 1F 20 0B 00 00 00 00 00 00 00 00 00 00 00 00 00 D5
2/5/2014 16:43:45.088 [RX] - 02 62 1A CB 70 1F 20 0B 00 00 00 00 00 00 00 00 00 00 00 00 00 D5 06
INSTEON EXT TX

2/5/2014 16:43:45.615 [RX] - 02 50 1A CB 70 AA AA 01 2B 20 0B  STD INSTEON RX
```

Appendix

Checksum Information

For Set Database, Set Properties and 0x20, Data14 will contain a 2s compliment of cmd1 through 2nd to last data record in the last data record.

Example of Checksum:

Message for Checksum Example	**AA BB CC 11 22 33 1F 2E 00 01 05 FF 00 00 00 00 00 00 00 00 00 00 DD**

The above example, device 11 22 33 is sent a command that requires a checksum in Data 14. The checksum is calculated by summing all the values from Command 1 to Data 13(0x2E + 0x01 + 0x05 + 0xFF = 0x133). We then calculate the compliment of the last byte(0x33 compliment = 0xCC). Then we add 1(0x01) to find the checksum for Data 14(0xCC + 0x01 = checksum = 0xCD).

Memory Map

All-Link Database (AL /L) Overview

The AL /L starts at the top of external (serial) EEPROM and grows downward. In the INSTEON Smoke Bridge, top of memory is 0x0FFF. Each AL /L Record is 8 bytes long, so the first record starts at 0x0FF8, the second record starts at 0x0FF0, and so on down to 0x0300 for a total of 416 links. In what follows, the 3-byte INSTEON Address contained in a record is called the *Device ID* or sometimes just the *ID*. The high byte (MSB) of the Device ID is *ID2*, the middle byte is *ID1*, and the low byte (LSB) is *ID0*.

EEPROM Structure Overview

Location	Comments
0x0FF8	All-Link Database Record
0x0FF0	Ack
0x0FD8	Smoke Bridge
.....	Controller
0x0300	Last Record, 416 total links allowed
0x02xx	Addressing below 0x0300 is ignored by the database

AL /L Record Format

INSTEON Smoke Bridge AL Record Format

Database entries with Record Control Bit 6: 0 = Responder and Group 1 will control the local load.

Field	Description
Record Control	Record Control Flag Bits: Bit7: 1 = Record is in use, 0 = Record is available Bit 6: 0 = Responder to (Slave of) Device ID Bit 5: Not Used Bit 4 & Bit 3: SmartHops (Keeps track of what the start hop should be) Bit 2: Not Used Bit 1: 1 = Record has been used before, 0 = High Water Mark Bit 0: Not Used
Group	All-Link Group Number this Device ID belongs to
ID	Device ID
Data 1	On Level
Data 2	Ramp Rate
Data 3	Not Used

To add a record to an AL /L, you search for an existing record that is marked available. (Available means the same as empty, unused or deleted.) If none is available, you create a new record at the end of the AL /L.

An unused record will have bit 7 of the *Record Control* byte set to zero. The last record in an AL /L will have bit 1 of the *Record Control* byte set to zero.

Overwriting an Empty AL /L Record

If you found an empty record, you simply overwrite it with your new record data.

Change bit 7 of the *Record Control* byte from zero to one to show that the record is now in use.

Set bit 6 of the *Record Control* byte to one if the device containing the AL /L is an INSTEON Controller of the INSTEON Responder Device whose *ID* is in the record. If instead the device containing the AL /L is an INSTEON Responder to the INSTEON Controller Device whose *ID* is in the record, then clear bit 6 of the *Record Control* byte to zero. In other words, within an AL /L, setting bit 6 means “I’m a Controller,” and clearing bit 6 means “I’m a Responder.”

Put the ALL-Link Group number in the *Group* field, and put the *Device ID* in the *ID* field. Finally, set the *Data 1*, *Data 2*, and *Data 3* fields appropriately for the *Record Class* you are storing.

Creating a New AL /L Record

To create a new record at the end of the AL /T, find the record with bit 1 of the *Record Control* byte set to zero, indicating that it is the last record in the AL /L. Flip that bit to one.

Get Database

This command asks the device for a record in its database or the entire database.

Command Name	Get Database
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x2F
Command 2	0x00
Data 1	Ignored Value
Data 2	0x00
Data 3	0x00 -> 0xFF (Hi Byte Address)
Data 4	0x00 -> 0xFF (Lo Byte Address)
Data 5	0x00 -> 0xFF (# of Records, 0x00 dumps all records)
Data 6 – Data 14	Ignored Value

Command Name	Get Database Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x2F
Command 2	0x00

Command Name	Get Database Data
Message Length	Extended Message (ED)
Message Type	Broadcast
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x2F
Command 2	0x00
Data 1	0x00
Data 2	0x01
Data 3	0x00 -> 0xFF (Hi Byte Address)
Data 4	0x00 -> 0xFF (Lo Byte Address)
Data 5	0x00
Data 6	Link Type Byte: Bit 0 = 0 Bit 1 = High Water (Marks the highest record used in the database) Bit 2 = 0 Bit 3 & Bit 4 = SmartHop (Keeps track of what the start hop should be) Bit 5 = 1 Bit 6 = Controls Me=0; I Control=1 Bit 7 = Inactive=0; Active=1
Data 7	Group Number of Link
Data 8	Linked Device ID (Hi Byte)
Data 9	Linked Device ID (Mid Byte)
Data 10	Linked Device ID (Lo Byte)
Data 11	On-Level of Link
Data 12	Ramp Rate of Link
Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	Empty Record
Message Length	Extended Message (ED)
Message Type	Broadcast
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x2F
Command 2	0x00
Data 1	0x00
Data 2	0x01
Data 3	0x00 -> 0xFF (Hi Byte Address)
Data 4	0x00 -> 0xFF (Lo Byte Address)
Data 5	0x00
Data 6	0x00
Data 7	0x00
Data 8	0x00
Data 9	0x00
Data 10	0x00
Data 11	0x00
Data 12	0x00
Data 13	0x00
Data 14	Calculated Checksum (See below in Checksum Information)

Command Example:

Get Database **Get Database Response** **Get Database Data** **Empty Record**	**AA BB CC 11 22 33 1F 2F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00** **11 22 33 AA BB CC 2B 2F 00** **11 22 33 AA BB CC 11 2F 00 00 01 0F FF 00 A2 00 11 CC AB FF 1F 01 79** **11 22 33 AA BB CC 11 2F 00 00 01 0F F7 00 00 00 00 00 00 00 00 00 CA**

The above example, device 11 22 33 is sent a command that asks it for its entire database (0x2F 0x00 0x00 0x00 0x00 0x00 0x00). Device 11 22 33 Acks the command then sends out its first database record (0x0F 0xFF). The next spot is an empty record so the device stops sending out its database (0x0F 0xF7).

Docklight Example:

```
9/23/2013 16:29:24.266 [TX] - 02 62 29 70 02 1F 2F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
9/23/2013 16:29:24.279 [RX] - 02 62 29 70 02 1F 2F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                              06  INSTEON EXT TX Get Database
                              02 50 29 70 02 1A 77 7B 2B 2F 00  INSTEON STD RX
                              02 51 29 70 02 1A 77 7B 11 2F 00 00 01 0F FF 00 A2 00 11 CC AB FF
                              1F 01 79  INSTEON EXT RX
                              02 51 29 70 02 1A 77 7B 11 2F 00 00 01 0F F7 00 AA 00 1C 30 B4 00
                              1C 00 04  INSTEON EXT RX
                              02 51 29 70 02 1A 77 7B 11 2F 00 00 01 0F EF 00 AA 01 18 94 F1 00
                              1F 00 6B  INSTEON EXT RX
                              02 51 29 70 02 1A 77 7B 11 2F 00 00 01 0F E7 00 AA 01 1A 77 7B 00
                              00 00 23  INSTEON EXT RX
                              02 51 29 70 02 1A 77 7B 11 2F 00 00 01 0F DF 00 00 00 00 00 00 00
                              00 00 E2  INSTEON EXT RX
```

Set Database

This command writes a record to the device's database.

Command Name	Set Database
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x2F
Command 2	0x00
Data 1	Ignored Value
Data 2	0x02
Data 3	0x00 -> 0xFF (Hi Byte Address)
Data 4	0x00 -> 0xFF (Lo Byte Address)
Data 5	0x01 -> 0x08 (# of bytes to write, over 0x08 is an error and ignored)
Data 6	
Data 7	Group Number of Link
Data 8	Linked Device ID (Hi Byte)
Data 9	Linked Device ID (Mid Byte)
Data 10	Linked Device ID (Lo Byte)
Data 11	On-Level of Link
Data 12	Ramp Rate of Link
Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Name	Set Database Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x2F
Command 2	0x00

Command Example:

Set Database **Set Database Response**	**AA BB CC 11 22 33 1F 2F 00 00 02 0F F7 08 AA 00 18 A1 C5 00 1C 00 7D** **11 22 33 AA BB CC 2B 2F 00**

The above example, device 11 22 33 is sent a command that writes a record to its database at location 0x0F 0xF7 (0x2F 0x00 0x00 0x02 0x0F 0xF7)

Docklight Example:

```
9/24/2013 09:41:43.127 [TX] - 02 62 29 70 02 1F 2F 00 00 02 0F F7 08 AA 00 18 A1 C5 00 1C 00 7D
9/24/2013 09:41:43.146 [RX] - 02 62 29 70 02 1F 2F 00 00 02 0F F7 08 AA 00 18 A1 C5 00 1C 00 7D
                              06  INSTEON EXT TX Set Database
                              02 50 29 70 02 1A 77 7B 2B 2F 00  INSTEON STD RX
```

Get Smoke Alarm ID

This command asks the smoke bridge for the ID of the smoke alarm it is paired to.

Command Name	Get Smoke Alarm ID
Message Length	Extended Message (ED)
Message Type	Direct
Transmitting Device ID	Controller
Receiving Device ID	Smoke Bridge
Flags Byte	Message Type
Command 1	0x2F
Command 2	0x00
Data 1	Ignored Value
Data 2	0x00
Data 3	0x03
Data 4	0x07
Data 5	0x01
Data 6 – Data 14	Ignored Value

Command Name	Get Smoke Alarm ID Response
Message Length	Standard Message (SD)
Message Type	Ack
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x2F
Command 2	0x00

Command Name	Smoke Alarm ID Data
Message Length	Extended Message (ED)
Message Type	Broadcast
Transmitting Device ID	Smoke Bridge
Receiving Device ID	Controller
Flags Byte	Message Type
Command 1	0x2F
Command 2	0x00
Data 1	0x01
Data 2	0x01
Data 3	0x03
Data 4	0x07
Data 5	0x00
Data 6	Link Type Byte: Bit 0 = 0 Bit 1 = High Water (Marks the highest record used in the database) Bit 2 = 0 Bit 3 & Bit 4 = 0 Bit 5 = 1 Bit 6 = 0 Bit 7 = Inactive=0; Active=1
Data 7	0x00
Data 8	Smoke Alarm ID (Hi Byte)
Data 9	Smoke Alarm ID (Mid Byte)
Data 10	Smoke Alarm ID (Lo Byte)
Data 11- Data 13	Ignored Value
Data 14	Calculated Checksum (See below in Checksum Information)

Command Example:

Get Smoke Alarm ID **Get Smoke Alarm ID Response Smoke Alarm ID Data**	**AA BB CC 11 22 33 1F 2F 00 01 00 03 07 01 00 00 00 00 00 00 00 00 00** **11 22 33 AA BB CC 2B 2F 00** **11 22 33 AA BB CC 11 2F 00 01 01 03 07 00 A2 00 31 A0 27 00 00 00 2B**

The above example, device 11 22 33 is sent a command that asks it for the ID of the smoke alarm it is paired to (0x2F 0x00 0x01 0x00 0x03 0x07 0x01). Device 11 22 33 Acks the command then sends out the ID of the smoke alarm it is paired to in Data 8 thru Data 10 (0x31 0xA0 0x27).

Docklight Example:

```
2/6/2014 17:02:28.461 [TX] - 02 62 1A CB 70 1F 2F 00 01 00 03 07 01 00 00 00 00 00 00 00 00 00
2/6/2014 17:02:28.480 [RX] - 02 62 1A CB 70 1F 2F 00 01 00 03 07 01 00 00 00 00 00 00 00 00 06
INSTEON EXT TX

2/6/2014 17:02:29.005 [RX] - 02 50 1A CB 70 AA AA 01 2B 2F 00  STD INSTEON RX

2/6/2014 17:02:29.312 [RX] - 02 51 1A CB 70 AA AA 01 11 2F 00 01 01 03 07 00 A2 00 31 A0 27 00 00
00 2B  EXT INSTEON RX
```